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10/637,206	08/07/2003	Donald P. Orofino II	MWS-029	4080

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EXAMINER	
JACOB, MARY C	

ART UNIT	PAPER NUMBER
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/637,206	OROFINO, DONALD P.	
	Examiner	Art Unit	
	Mary C. Jacob	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-93* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-93* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 August 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-93 have been presented for examination.

2. The Preliminary Amendment, dated 2/1/05 has been considered.

Drawings

3. The drawings are objected to because Figures 6A, 6B, 7, 9B, 9C, 9D and 9E are dark and it is difficult to see the details. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because line 3 states "A method and system control data collection..." wherein it would be clearer if it was written, "A method and system to control data collection...". Correction is required. See MPEP § 608.01(b).

5. Page 18, line 25 of the specification, "collected" should read "collect".

Claim Objections

6. Claims 13, 30, 47, 65 and 88 are objected to because of the following informalities. Appropriate correction is required.

7. Claims 13, 30, 47, 65, and 88, line 2, read: "to selected of the two or more data modules". For clarity, the claims should read, "to the selected of the two or more data modules".

Claim Interpretation

8. Claims 13, 30, 47, 65, and 88 read the following: ..."wherein synchronizing the two or more data modules comprises conveying to selected of the two or more data modules a direction to synchronize execution of one or more functions at the selected of the two or more data modules by utilizing a broadcasting function". The specification, paragraph 0080, states the following in discussing the broadcast function, "executing a function on one of the data modules can command a corresponding action on other of

the data modules". Therefore, the claim was interpreted to read that the execution of a function on one or more data modules can command a corresponding action on another of the data modules.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 78, 79 and 84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 78 and 79 recite "The medium of claim 2" and Claim 84 recites the limitation "the medium of claim 8". There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 12, 15-18, 32-35, 49-53, 64, 67-72, 75, 76, 90-93 are rejected under 35 U.S.C. 102(b) as being anticipated by Bishop ("Modern Control Systems Analysis and

Design Using Matlab and Simulink", Addison-Wesley Logman, Inc., pages 1, 7-16, 95-102, 1997).

14. As to Claims 1, 53, 72, 75 and 76, Bishop teaches: in a simulation environment, a method for controlling collection of data generated by a dynamic system model, comprising: providing the dynamic system model configured to generate data (Figure 5.4; Figure 5.12); providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model (Figure 5.12, yout, Auto-Scale Graph, To Workspace (s)); activating the dynamic system model, thereby generating data (page 98, lines 7-11, Figure 5.10; Figure 5.11); and synchronizing data collection by the two or more data collection modules using the control system (page 98, lines 7-11; Figure 5.11; section 5.4.1, paragraph 2, saving parameters to the workspace).

15. As to Claims 12, 64, and 87 Bishop teaches: providing a time tracking function that directs a graphical display indication of a time history of data collected (Figure 1.13, Figure 1.15).

16. As to Claims 15, 32, 49, 67 and 90 Bishop teaches: the simulation environment comprises at least one of a graphical, textual, data flow, time based, and event based environments (Page 1, 2nd paragraph).

17. As to Claims 16, 33, 50, 68, 70 and 91, Bishop teaches: the two or more data modules are virtually formed using at least one of MATLAB, JAVA, C++, object-oriented code, and computer code, wherein the dynamic system is at least one of a virtual

system and a physical system (page 1, paragraph 2; Section 1.3, paragraphs 1, 2 and 3; Figures 1.9-1.12 and descriptions).

18. As to Claims 17, 34, 51, 69 and 92 Bishop teaches: wherein the two or more data modules provide displays in the form of at least one of textual, graphical, multi-dimensional, oscilloscope, and spectrum analyzer (Figure 1.9; page 10, paragraph 1; Figure 5.11; section 5.4.1, paragraph 2, saving parameters to the workspace).

19. As to Claims 18, 35, 52, 71 and 93, Bishop teaches: wherein the control system is a separate system from the dynamic system (Figure 5.12, wherein the data modules are separate from the dynamic model contained in the feedback loop).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. Claims 2-4, 6, 7, 13, 19-21, 23, 24, 29, 30, 54-56, 58, 59, 65, 73, 77-79, 81, 82 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop as applied to claims 1, 53 and 76 above, in view of Guiberson et al (US Patent 6,088,029).

22. As to Claims 2-4, 6, 7, 13, 19-21, 23, 24, 30, 54-56, 58, 59, 65, 73, 77-79, 81, 82 and 88, Bishop teaches: in a simulation environment, a method for controlling collection of data generated by a dynamic system model, comprising: providing the dynamic system model configured to generate data (Figure 5.4; Figure 5.12); providing a control

system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model (Figure 5.12, yout, Auto-Scale Graph, To Workspace (s)); activating the dynamic system model, thereby generating data (page 98, lines 7-11, Figure 5.10; Figure 5.11); synchronizing data collection by the two or more data collection modules using the control system (page 98, lines 7-11; Figure 5.11; section 5.4.1, paragraph 2, saving parameters to the workspace); providing a time tracking function that directs a graphical display indication of a time history of data collected (Figure 1.13, Figure 1.15). Bishop further teaches stop, restart and pause parameters in a simulation menu (Figure 1.17) and the dynamic updating of a graphical display during simulation (page 12, lines 13-14).

23. Bishop does not expressly teach: executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected; a user reviewing the display of data collected while data continues to be collected without updating the display; a user manipulating the display of data collected while data continues to be collected; providing an interface having a communication port for communicating with each of the two or more data modules; directing a review of data collected by the two or more data collection instruments by utilizing a review function; wherein synchronizing the two or more data modules comprises conveying to selected of the two or more data modules a direction to synchronize execution of one or more functions at the selected of the two or more data modules by utilizing a broadcasting function.

24. Guiberson et al teaches an improved dialog box interface for measurement instruments that allows both the display of real-time data and the display of a control window, the control window including one or more user-selectable options and at least a portion of the real time data, therefore not covering up data by the control window which typically cover up a large portion of the measurement system's display device, preventing the user from seeing his or her data in the underlying application (column 1, lines 23-55). Guiberson et al further teaches executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected (column 4, lines 58-60); a user reviewing the display of data collected while data continues to be collected without updating the display (column 4, lines 63-65; column 5, lines 46-58); a user manipulating the display of data collected while data continues to be collected (column 5, lines 1-8); providing an interface having a communication port for communicating with each of the two or more data modules (Figure 1, element 121; Figure 5, element 516, 508; column 3, lines 11-15); directing a review of data collected by the two or more data collection instruments by utilizing a review function (column 5, lines 15-37); wherein synchronizing the two or more data modules comprises conveying to selected of the two or more data modules a direction to synchronize execution of one or more functions at the selected of the two or more data modules by utilizing a broadcasting function (column 4, lines 54-57; column 5, line 59-column 6, line 16).

25. Bishop and Guiberson et al are analogous art since they are both directed to data acquisition and the display of real-time data.

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the synchronizing of data collection, dynamic updating of a graphical display and the use of the stop, pause and restart parameters as taught by Bishop to include a snapshot function, the review of display while data continues to be collected without updating the display, manipulating the display of data while data continues to be collected, providing an interface having a communications port, and the utilization of a broadcast function as taught by Guiberson et al since Guiberson et al teaches an improved dialog box interface for measurement instruments that allows both the display of real-time data and the display of a control window, the control window including one or more user-selectable options and at least a portion of the real time data, therefore not covering up data by the control window which typically cover up a large portion of the measurement system's display device, preventing the user from seeing his or her data in the underlying application (column 1, lines 23-55).

27. Claims 5, 8-10, 14, 36, 42-44, 46, 48, 57, 60-62, 66, 74, 80, 83-85, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop as applied to claims 1, 53 and 76 above, in view of Mathworks ("Using Simulink", Version 2.2, January 1998, pages 4-1-4-20, 7-2, 7-8-7-14, 9-118-9-125, 9-146-9-152).

28. As to Claims 5, 8-10, 14, 36, 42-44, 46, 48, 57, 60-62, 66, 74, 80, 83-85, and 89, Bishop teaches: a method for controlling collection of data generated by a dynamic system model, in a simulation environment through the use of the simulation program, SIMULINK (page 1), providing the dynamic system model configured to generate data

(Figure 5.4; Figure 5.12); providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model (Figure 5.12, yout, Auto-Scale Graph, To Workspace (s)); activating the dynamic system model, thereby generating data (page 98, lines 7-11, Figure 5.10; Figure 5.11); and synchronizing data collection by the two or more data collection modules using the control system (page 98, lines 7-11; Figure 5.11; section 5.4.1, paragraph 2, saving parameters to the workspace); providing a time tracking function that directs a graphical display indication of a time history of data collected (Figure 1.13, Figure 1.15).

29. Bishop does not expressly teach executing a suspend function to pause collection of data while the dynamic system continues to operate; a user defining data history parameters utilizing a data history function; the data history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats; directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function; and utilizing an event based trigger to initiate a data module action.

30. Mathworks teaches Version 2.2 of SIMULINK, including the following functionalities: comprising executing a suspend function to pause collection of data while the dynamic system continues to operate (page 4-5, last 2 paragraphs); a user defining data history parameters utilizing a data history function (page 9-124); the data

history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats (page 9-124); directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function (9-146, 9-148; page 9-151, Description, paragraph 53, page 9-152); and utilizing an event based trigger to initiate a data module action (pages 7-2, 7-8, 7-9).

31. Bishop and Mathworks are analogous art since they are both directed to SIMULINK software.

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the SIMULINK simulations as taught in Bishop to include executing a suspend function to pause collection of data while the dynamic system continues to operate; a user defining data history parameters utilizing a data history function; the data history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats; directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function; and utilizing an event based trigger to initiate a data module action as taught by Mathworks since Mathworks teaches these functions are available in the SIMULINK environment that is used in the method taught by Bishop.

33. Claims 11, 63 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop as applied to claims 1, 53 and 76 above, in view of Chen et al (US Patent 5,684,945).

34. As to Claims 11, 63 and 86, Bishop teaches in a simulation environment, a method for controlling collection of data generated by a dynamic system model, comprising: providing the dynamic system model configured to generate data (Figure 5.4; Figure 5.12); providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model (Figure 5.12, yout, Auto-Scale Graph, To Workspace (s)); activating the dynamic system model, thereby generating data (page 98, lines 7-11, Figure 5.10; Figure 5.11); synchronizing data collection by the two or more data collection modules using the control system (page 98, lines 7-11; Figure 5.11; section 5.4.1, paragraph 2, saving parameters to the workspace).

35. Bishop does not expressly teach a user utilizing a scroll function to scroll through previously collected data while the dynamic system model is operating.

36. Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103) wherein a user can utilize a scroll function to scroll through previously collected data while dynamic system is operating (column 23, lines 31-48).

37. Bishop and Chen et al are analogous art since they are both directed to data acquisition and the display and manipulation of real-time data.

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of controlling collection of data generated by a dynamic system model as taught in Bishop to include a scroll function allowing a user to scroll through previously collected data while the dynamic system is still operating as taught in Chen et al since Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103).

39. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop and Guiberson et al as applied to claim 19 above, and further in view of Chen et al.

40. As to Claim 28, Bishop and Guiberson et al teach: a method for controlling collection of data generated by a dynamic system model, comprising: providing the dynamic system model configured to generate data providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model; activating the dynamic system model, thereby generating data; synchronizing data collection by the two or more data collection modules using the control system and executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected (See above paragraphs 21-26).

41. Bishop and Guiberson et al do not expressly teach: a user utilizing a scroll function to scroll through previously collected data while the dynamic system model is operating.

42. Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103) wherein a user can utilize a scroll function to scroll through previously collected data while dynamic system is operating (column 23, lines 31-48).

43. Bishop and Guiberson et al and Chen et al are analogous art since they are both directed to data acquisition and the display and manipulation of real-time data.

44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of controlling collection of data generated by a dynamic system model as taught in Bishop and Guiberson et al to include a scroll function allowing a user to scroll through previously collected data while the dynamic system is still operating as taught in Chen et al since Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103).

45. Claims 22, 25-27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop and Guiberson et al as applied to claim 19 above, and further in view of Mathworks.

46. As to Claim 19, Bishop and Guiberson et al teach: a method for controlling collection of data generated by a dynamic system model, in a simulation environment through the use of the simulation program, SIMULINK (Bishop: page 1) comprising: providing the dynamic system model configured to generate data providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model; activating the dynamic system model, thereby generating data; synchronizing data collection by the two or more data collection modules using the control system and executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected (See above paragraphs 21-26).

47. Bishop and Guiberson et al do not expressly teach: executing a suspend function to pause collection of data while the dynamic system continues to operate; a user defining data history parameters utilizing a data history function; the data history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats; directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function; and utilizing an event based trigger to initiate a data module action.

48. Mathworks teaches Version 2.2 of SIMULINK, including the following functionalities: comprising executing a suspend function to pause collection of data

while the dynamic system continues to operate (page 4-5, last 2 paragraphs); a user defining data history parameters utilizing a data history function (page 9-124); the data history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats (page 9-124); directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function (9-146, 9-148; page 9-151, Description, paragraph 53, page 9-152); and utilizing an event based trigger to initiate a data module action (pages 7-2, 7-8, 7-9).

49. Bishop and Guiberson et al and Mathworks are analogous art since they are both directed to SIMULINK software.

50. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the SIMULINK simulations as taught in Bishop and Guiberson et al to include executing a suspend function to pause collection of data while the dynamic system continues to operate; a user defining data history parameters utilizing a data history function; the data history parameters comprise at least one of amount of data history, amount of memory allocation for storing data history, types of data collected, signal attributes, and data formats; directing a buffering mode to be utilized during data collection from one of a circular buffering mode, a finite buffering mode, and a buffer extension mode by executing a data buffering mode function; and utilizing an event based trigger to initiate a data module action as taught by Mathworks

since Mathworks teaches these functions are available in the SIMULINK environment that is used in the method taught by Bishop and Guiberson et al.

51. Claims 37-41, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop and Mathworks as applied to claim 36 above, and further in view of Guiberson et al.

52. As to Claims 37-41, and 47, Bishop and Mathworks teach: a method for controlling collection of data generated by a dynamic system model, in a simulation environment through the use of the simulation program, SIMULINK (page 1), providing the dynamic system model configured to generate data; providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model; activating the dynamic system model, thereby generating data; and synchronizing data collection by the two or more data collection modules using the control system; executing a suspend function to pause collection of data while the dynamic system continues to operate (See above paragraphs 25-30). Bishop and Mathworks further teaches stop, restart and pause parameters in a simulation menu (Bishop: Figure 1.17) and the dynamic updating of a graphical display during simulation (Bishop: page 12, lines 13-14).

53. Bishop and Mathworks do not expressly teach executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected; a user reviewing the display of data collected while data continues to be

collected without updating the display; a user manipulating the display of data collected while data continues to be collected; providing an interface having a communication port for communicating with each of the two or more data modules; directing a review of data collected by the two or more data collection instruments by utilizing a review function; wherein synchronizing the two or more data modules comprises conveying to selected of the two or more data modules a direction to synchronize execution of one or more functions at the selected of the two or more data modules by utilizing a broadcasting function.

54. Guiberson et al teaches an improved dialog box interface for measurement instruments that allows both the display of real-time data and the display of a control window, the control window including one or more user-selectable options and at least a portion of the real time data, therefore not covering up data by the control window which typically cover up a large portion of the measurement system's display device, preventing the user from seeing his or her data in the underlying application (column 1, lines 23-55). Guiberson et al further teaches executing a snapshot function to direct at least one of the two or more data modules to freeze a display of data collected while the dynamic system model continues to execute and the data continues to be collected (column 4, lines 58-60); a user reviewing the display of data collected while data continues to be collected without updating the display (column 4, lines 63-65; column 5, lines 46-58); a user manipulating the display of data collected while data continues to be collected (column 5, lines 1-8); providing an interface having a communication port for communicating with each of the two or more data modules (Figure 1, element 121;

Figure 5, element 516, 508; column 3, lines 11-15); directing a review of data collected by the two or more data collection instruments by utilizing a review function (column 5, lines 15-37); wherein synchronizing the two or more data modules comprises conveying to selected of the two or more data modules a direction to synchronize execution of one or more functions at the selected of the two or more data modules by utilizing a broadcasting function (column 4, lines 54-57; column 5, line 59-column 6, line 16).

55. Bishop and Mathworks and Guiberson et al are analogous art since they are both directed to data acquisition and the display of real-time data.

56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the synchronizing of data collection, dynamic updating of a graphical display and the use of the stop, pause and restart parameters as taught by Bishop and Mathworks to include a snapshot function, the review of display while data continues to be collected without updating the display, manipulating the display of data while data continues to be collected, providing an interface having a communications port, and the utilization of a broadcast function as taught by Guiberson et al since Guiberson et al teaches an improved dialog box interface for measurement instruments that allows both the display of real-time data and the display of a control window, the control window including one or more user-selectable options and at least a portion of the real time data, therefore not covering up data by the control window which typically cover up a large portion of the measurement system's display device, preventing the user from seeing his or her data in the underlying application (column 1, lines 23-55).

57. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop and Mathworks as applied to claim 36 above, and further in view of Chen et al.

58. As to Claim 45, Bishop and Mathworks teach: a method for controlling collection of data generated by a dynamic system model, in a simulation environment through the use of the simulation program, SIMULINK (page 1), providing the dynamic system model configured to generate data; providing a control system having two or more data modules, the two or more data modules being communicatively coupled to receive data from the dynamic system model; activating the dynamic system model, thereby generating data; and synchronizing data collection by the two or more data collection modules using the control system; executing a suspend function to pause collection of data while the dynamic system continues to operate (See above paragraphs 25-30). Bishop and Mathworks further teaches stop, restart and pause parameters in a simulation menu (Bishop: Figure 1.17) and the dynamic updating of a graphical display during simulation (Bishop: page 12, lines 13-14).

59. Bishop and Mathworks do not expressly teach a user utilizing a scroll function to scroll through previously collected data while the dynamic system model is operating.

60. Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103) wherein a user can utilize a scroll function to scroll through previously collected data while dynamic system is operating (column 23, lines 31-48).

61. Bishop and Mathworks et al and Chen et al are analogous art since they are both directed to data acquisition and the display and manipulation of real-time data.

62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of controlling collection of data generated by a dynamic system model as taught in Bishop and Mathworks et al to include a scroll function allowing a user to scroll through previously collected data while the dynamic system is still operating as taught in Chen et al since Chen et al teaches a highly flexible analysis tool for a data processing system and further, a tool for monitoring, capturing, saving, retrieval and analysis of data processing system operations (column 2, lines 64-65; column 3, lines 103).

Conclusion

63. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

64. Kodosky et al (US Patent 4,914,568) teaches a method for electronically modeling a process including the step of electronically constructing at least one diagram display such that the diagram display graphically displays a procedure by which the one or more input variables can produce the one or more output variables.

65. Vujosevic ("Object Oriented Visual Interactive Simulation", Proceedings of the 1990 Winter Simulation Conference) teaches visual interactive modeling and simulation.

66. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner can normally be reached on M-F 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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